



NATURAL RESOURCES DEFENSE COUNCIL

**Testimony of the Natural Resources Defense Council
On H.R. 547,
The Advanced Fuels Infrastructure Research and Development Act**

**By
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**Subcommittee on Energy and Environment
Committee on Science and Technology
U.S. House of Representatives**

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My name is Richard Kassel, and I am pleased to testify on H.R. 547, the Advanced Fuels Infrastructure Research and Development Act.

I am a Senior Attorney at the Natural Resources Defense Council (NRDC), where I direct NRDC's Clean Fuels and Vehicles Project. My expertise includes developing clean diesel and alternative fuel programs for large urban bus and truck fleets, as well as federal advocacy on EPA's various diesel and renewable fuels programs over the past fifteen years. In addition to my NRDC fuels and vehicles work, I currently advise the U.S. Environmental Protection Agency as a member of its Clean Air Act Advisory Committee and its Mobile Sources Technical Review Subcommittee, and have served on numerous technical advisory committees on fuels and vehicles issues in the United States and around the world.

NRDC is a national, nonprofit organization of scientists, lawyers, and environmental specialists dedicated to protecting public health and the environment. Founded in 1970, NRDC has more than 1.2 million members and online advocates nationwide, served from offices in New York, Washington, Los Angeles, San Francisco, Chicago, and Beijing. Most relevant to today's hearing, NRDC's Clean Fuels and Vehicles Project has been in the forefront of research and advocacy to reduce diesel pollution, petroleum dependency, and global warming, and to increase the use of bio-based alternative fuels and clean diesel technologies, for many years.

Thank you for the opportunity to testify.

Introduction: The Importance of Transitioning to Ultra-Low Sulfur Diesel Fuel and Biofuels

America's continuing reliance on gasoline and diesel fuel for its transportation needs contributes to a range of critically important environmental and energy concerns. H.R. 547 will help transition the nation to cleaner, more sustainable fuels in two key areas.

H.R. 547 and the Ultra-Low Sulfur Diesel Fuel Transition

H.R. 547 can help transition the nation to the ultra-low sulfur diesel ("ULSD") fuel that is critical to reducing diesel pollution nationwide.

More than 150 million people live in areas that fail to meet EPA's health standards for ozone and/or particulate matter, in part due to emissions from today's dirty diesel vehicles.¹ In cities and towns throughout the nation, dirty trucks, buses, construction equipment and other diesel engines contribute a disproportionately large share of the particulate matter (PM) that triggers asthma attacks, bronchitis, and roughly 25,000 premature deaths every year. In addition, more than 35 percent of the nitrogen oxides (NOx) emissions that are key ozone precursors come from diesel engines.²

Thanks to EPA's landmark Highway Diesel Rule,³ more than 90 percent of the health impacts from today's dirty diesel trucks and buses will be eliminated over the next two decades, as today's engines are replaced by new engines that meet the Rule's stringent emission standards for PM and NOx.

The health benefits of implementing EPA's diesel programs successfully will be enormous. When all of today's engines have been replaced by new engines that meet the standards set in the Highway Diesel Rule, which EPA estimates will occur in 2030, more than 8,300 premature deaths, 1.5 million lost work days, and \$66 billion in net health and other costs will be eliminated every year.⁴ Combined with EPA's Nonroad Diesel Rule, the combination of ULSD and new engines that meet the standards of these two rules will eliminate more than 20,000 premature deaths, tens of thousands of child asthma emergencies and other respiratory illnesses, and more than \$140 billion in health costs every year in 2030.⁵

¹ American Lung Association, *State of the Air: 2006*.

² U.S. Dept. of Energy, *Transportation Energy Data Book*, Volume 25, Tables 12.4, 12.5 (2006).

³ 66 Federal Register 5001 *et seq.* (January 18, 2001).

⁴ *Id.* at 5005.

⁵ See 69 Federal Register 38957 *et seq.* (June 29, 2004) for Nonroad Diesel Rule benefits.

ULSD fuel is the key to achieving these pollution reductions and public health benefits. Today's modern diesel engines are equipped with extremely sophisticated catalysts and filters that can reduce harmful PM and NOx by more than 90 percent. However, all of these emission control technologies are extremely sensitive to the sulfur levels of the fuel. Indeed, higher-than-expected sulfur levels can impair—and even disable—these technologies. Just as it was critical to eliminate leaded gasoline to enable the use of effective catalytic converters two decades ago, it is now critical to use ULSD fuel to enable the effective use of today's diesel emission control technologies.

It is important to note that the transition to ULSD is, in fact, running smoothly. Since mid-October, at least 80 percent of the nation's highway diesel fuel has been required to be ULSD, pursuant to the Highway Diesel Rule. In fact, EPA has reported that more than 90 percent of the highway diesel fuel is already ULSD.⁶ Consequently, the heavy-duty engine industry has moved forward with its 2007 offerings, all of which require ULSD.

NRDC shares EPA and industry concern about the lack of ULSD labels at many service stations around the nation.⁷ However, there is a big difference between a labeling issue and an availability issue. The evidence is now clear that ULSD is widely available, in excess of the minimum required by the Highway Diesel Rule.

With ULSD now in the marketplace, many car makers have announced plans, with great fanfare, to introduce clean, fuel-efficient diesel cars, light trucks, and sport-utility vehicles to the nation's showrooms next year. Indeed, these diesel vehicles were the centerpiece of last week's Washington Auto Show and similar shows around the nation over the past few months. All of these diesel vehicles will require ULSD to operate cleanly and effectively. Car makers would not be so excited about their potential to sell new diesel passenger vehicle models next year if they had any concerns about the retail availability of the ULSD fuel that these vehicles will require.

Moreover, EPA has developed effective mechanisms to ensure that diesel fuel that leaves the refinery gates as ULSD arrives at the terminal and the retail seller as ULSD. These mechanisms have evolved since 2001, in large part due to EPA's ongoing dialogue with stakeholders throughout the refining, distribution, and retailing industries. For example, last year, EPA provided a temporary increase in the sulfur testing tolerance, as well as an amended ULSD tracking system in response to industry concerns.⁸ While we understand that some retailers would prefer a simpler system of verification and monitoring and we support R & D programs that are designed to create methods and technologies for such a system, we also think that it is important to note that the current ULSD transition has been a smooth one so far.

⁶ Inside EPA, "EPA Speeds Enforcement of Diesel Fuel Labels Due to Industry Concern," January 26, 2007.

⁷ The January 26, 2007 Inside EPA article reported that EPA has found that 76 percent of the diesel fuel labels have not been updated yet.

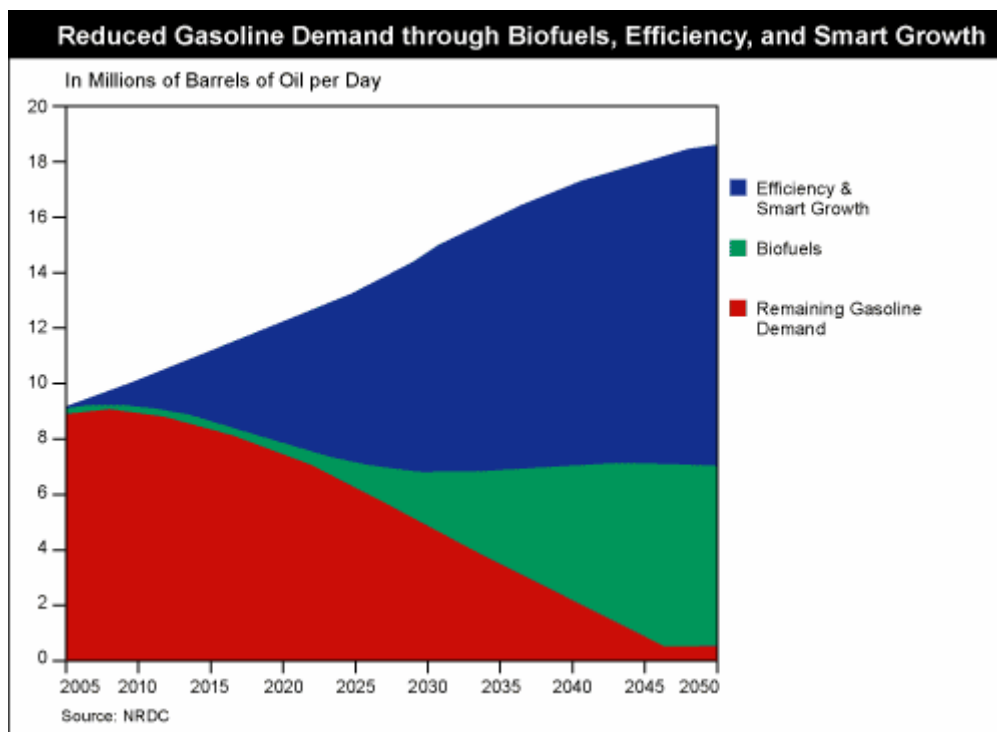
⁸ See EPA420-F-06-033, April 2006. "Direct Final Rule and Notice of Proposed Rulemaking for Amendments to the Nonroad and Highway Diesel Fuel Regulations." Also Available at: www.epa.gov/otaq/regs/fuels/diesel/420f06033.htm.

H.R. 547 and the Biofuels Transition

H.R. 547 can help transition the nation to biofuels that will help end our dependence on oil, and that can reduce global warming pollution as well.

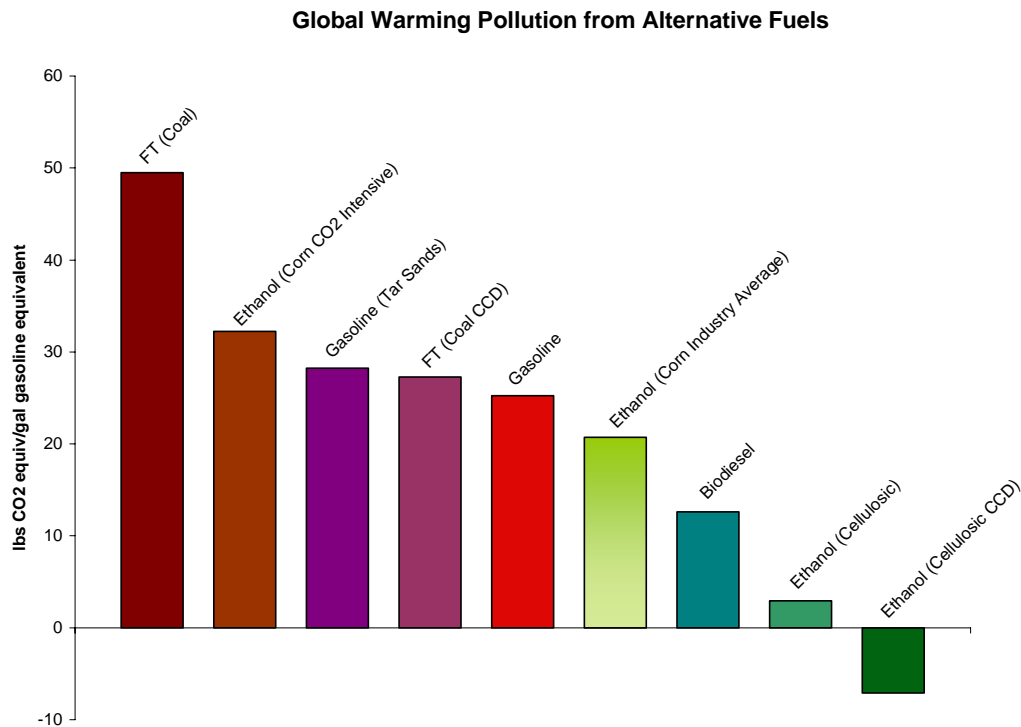
It is well-known that the nation remains dependent on oil for its transportation needs, most of which comes from some of the world's most unstable and/or unfriendly nations. And, it is equally well-known that this oil dependence contributes greatly to the ever-growing greenhouse gas emissions that contribute to global warming.

A comprehensive strategy that combines increased vehicle efficiency with increased use of biofuels can reduce virtually all of our projected gasoline demand in 2050, as illustrated in the graph below.



However, not all “alternative fuels” are alike. Some offer significant lifecycle emissions reductions in global warming pollutants (e.g., cellulosic ethanol), while others can be worse than (or, in the best case, roughly equivalent to) gasoline (e.g., coal-to-liquid fuels), as the chart below shows.⁹ Thus, it is critical that Congress and the President pursue oil savings in a way that also produces global warming pollution savings.

⁹ NRDC research based on published materials from multiple sources.



In sum, it is critically important that EPA's Highway Diesel Rule is implemented successfully, and it is critically important that Congress and the President take action to ensure that the nation ends its dependence on oil in a way that simultaneously reduces global warming pollution. H.R. 547 can play a meaningful role in succeeding in both efforts.

NRDC Supports H.R. 547 with Modifications

With minor modifications, H.R. 547 can play a meaningful role towards ensuring the effective transition to ULSD, and towards ensuring that increased biofuels are effectively incorporated into the nation's fuel infrastructure and transportation systems. However, the modifications that NRDC proposes are critically important to the ultimate success of the bill, and to our support.

First, it is critical to add EPA as part of the team that will implement H.R. 547. Currently, the bill directs the Secretary of Energy, in consultation with the National Institute of Standards and Technology only, to carry out an effective program of research, development, demonstration and commercial application of materials to be added to alternative biobased fuels and ULSD, and to seek portable, low-cost and accurate ULSD testing methods and technologies, to make each of these fuels more compatible with our existing fuel storage and delivery infrastructure. However, EPA is the agency charged with implementing the Highway Diesel Rule and the Renewable Fuel Standard. EPA is the agency with responsibilities under the Clean Air Act, as amended, and the Energy Policy Act of 2005 to create effective programs to monitor fuel quality throughout the

system. Indeed, for the past six years, EPA has worked closely with industry and other stakeholders to ensure that the ULSD that comes out of the nation's refineries arrives at the pump as ULSD. And, as noted above, EPA has managed the transition to ULSD successfully. While further R & D efforts may provide added benefits to the ongoing ULSD transition, NRDC believes strongly that those efforts will be most successful if EPA is a designated member of the inter-governmental team that oversees this work and implements H.R. 547.

Second, many terms in H.R. 547 have to be defined clearly. While ULSD is an accepted term already, phrases like "advanced fuels," "biobased fuels," "alternative biobased fuels," and "alternative fuels" are used seemingly interchangeably throughout the bill.¹⁰ Given our concerns about energy security paths that would not reduce global warming pollution, about the potential increased use of coal-to-liquid fuels, and about the wide range of current and potential alternatives to conventional gasoline and diesel fuel under consideration, clarifying these definitions is critical. As noted above, NRDC does not support energy security policies that do not simultaneously address global warming.

Last, NRDC believes that the bill draft provided to us earlier this month would benefit from some minor text editing. We have provided these edits to committee staff, and include those that are not reflected in our prior two paragraphs here:

- Page 2, line 7: delete "newer."
- Page 2, line 10: insert "potentially" before "placing."
- Page 2, line 21-25: after "sale" in line 25, insert "if not transported properly" and replace "can" with "may" in line 21.
- Page 3, line 14: replace "and" with "or."

Conclusion:

Certainly, the nation would benefit from programs that help ensure the smooth transition to ULSD and an increased use of biofuels. H.R. 547 appears to be a meaningful step towards both of these important steps. However, NRDC strongly urges the Subcommittee to make the modifications suggested herein before moving this bill forward.

Thank you for the opportunity to testify today.

¹⁰ It is worth noting that "Low Sulfur Diesel" is not defined in the bill either. Presumably, this term refers to diesel fuel containing no more than 500 parts-per-million sulfur. In the final bill, NRDC encourages the Subcommittee to clearly define both Low Sulfur Diesel and ULSD.